



*A Patriot radar in position at Incirlik Air Base, Turkey, during NATO Operation Display Deterrence.*

## U.S. Army Europe's ADA Community Pushes Limits

### Patriot Units Defend Three Nations From Tactical Ballistic Missile Attack

**Heidelberg, Germany** – Pushing the limits, the U.S. Army Europe (USAREUR) Air Defense Artillery (ADA) community united during the war in Iraq to execute simultaneous missions in three geographically separated operations, while part of a joint/combined and multi-national environment. Agile and flexible, Patriot soldiers quickly adapted to changing environments while providing missile defense for three nations. USAREUR Patriot units deployed to Israel as a joint task force closely integrated with Israel Defense Force air defense units, to Turkey under a North Atlantic Treaty Organization (NATO) flag, and to Kuwait in support of U.S. and Coalition forces engaged in Operation Iraqi Freedom. Every ADA Patriot officer within USAREUR deployed in support of an operation. The experience was challenging and proved highly successful at deterring Iraqi aggression.

The overarching air defense mission was to defend critical U.S., Coalition and NATO assets against Iraqi tactical ballistic missile (TBM) strikes. Iraq's TBMs posed a serious threat to neighboring countries, as demonstrated in the 1991 Gulf War. Iraqi TBM with ranges in excess of 93 miles—more than the allowed UN limit—and the capability of carrying conventional, chemical or biological warheads caused serious anxiety amongst countries neighboring Iraq.

The USAREUR air defense units in Israel, Kuwait, and Turkey executed their mission effectively through a combination of training, rapid deployment, and effective deterrence. Patriot provided a robust capability against ballistic missiles,

aircraft, and remotely piloted vehicles. Early in the war, Patriot demonstrated its effectiveness when a Patriot firing battery from USAREUR's 6-52 ADA successfully intercepted and destroyed two tactical ballistic missiles during an attack on Kuwait. The Patriot's guidance and control system locked onto the TBMs, successfully engaging the targets with Guidance Enhanced Missiles.

In preparation for Operation Iraqi Freedom, all of USAREUR's ten Patriot batteries were committed to ongoing operations within Iraq, Israel and Turkey. The 69th ADA Brigade and 5-7 ADA (-) with three Patriot batteries went to Israel. Two additional batteries from 5-7 ADA deployed to provide theater missile defense protection for Turkey. The 6-52 ADA was dedicated, with all five of its batteries, to provide theater ballistic missile protection to V Corps in support of U.S. Central Command's mission to remove the Hussein Regime from power.

#### **Joint Task Force Cobra: Defending Israel**

USAREUR's 69th ADA BDE was tasked to establish the core of Joint Task Force Cobra, which had the mission of augmenting existing Israeli missile defense forces against Iraqi air and missile attack. The joint task force consisted of the 5-7 ADA (-) and three of its five Patriot batteries, including the battalion maintenance company. To command Joint Task Force Cobra, USAREUR chose the world's senior air defender, Maj. Gen. Stanley E. Green, chief of Air Defense



*Joint Task Force Cobra soldiers assemble beneath an Israel flag.*

Artillery and commander of the U.S. Army Air Defense Artillery Center, Fort Bliss, Texas.

Having a forward-deployed Patriot brigade provides our nation with a quick reaction force that can deploy throughout the EUCOM/CENTCOM area of responsibility and put a missile defense capability on the ground to respond to ballistic missile threats. The 69th ADA Brigade's mission in Israel began as Exercise Juniper Cobra 2003, a regularly scheduled exercise that made the transition from peace to war as U.S. and Coalition forces launched Operation Iraqi Freedom in nearby Iraq. Having demonstrated its interoperability with Israeli Patriot and Arrow missile defense units, Joint Task Force Cobra was task to help provide an integrated national missile defense of Israel.

To accomplish its task, Joint Task Force Cobra was assembled with the nucleus coming from the 69th ADA Brigade, V Corps, augmented by a variety of commands throughout European Command (EUCOM) subordinate units. The U.S. "shooters" were comprised of the 5-7 ADA (-) stationed in Hanau, Germany.

The Patriot missile—originally designed to shoot down aircraft, but modified to intercept enemy missiles—made its combat debut during the 1991 Gulf War when Iraq began

lobbing Scud missiles against Israel and Saudi Arabia. U.S. and Israeli Patriot batteries engaged Iraqi Scud missiles in the sky above Tel Aviv, but debris from the intercepts—including unexploded warheads—damaging buildings and inflicting civilian casualties. Following the Gulf War, the Israeli military has been working to improve its own missile defenses, developing the new Arrow missile system to intercept incoming missiles at greater ranges and higher altitudes. Financed in part by the United States, the \$2 billion Arrow program produced the first weapon specifically designed to shoot down incoming missiles.

In Israel, training has been closely coordinated since the end of the Gulf War. The pre-scheduled Exercise Juniper Cobra 2003 executed in January of this year provided the first opportunity to evaluate a two-tier air defense combination using the Patriot system in conjunction with the Israeli Arrow system. The timing could not have been better, as it demonstrated to the Iraqi government that U.S. forces were still committed to defending the Israel from the threat of tactical ballistic missiles. The demonstration of capabilities proved to be a huge deterrence, as no missiles were launched towards Israel during Operation Iraqi Freedom.

In early February, Exercise Juniper Cobra 2003 became a real mission. "As things were heating up in Iraq, it was decided to go ahead and stay and begin occupying battle positions," said Green. With "stop movement" and, later, "stop loss" orders in effect to keep personnel in place, the "joint warriors" were called to extend their stay, moving to reoccupy sites in which they had just rehearsed. The joint task force accepted additional forces and was soon fully prepared to counter the theater missile defense threat facing Israel.

The key to success for the joint task force success in Israel was the orderly and rapid transition of forces from an exercise configuration to the joint task force configuration and integration of new joint staff members. 69th ADA Brigade had already identified all required personnel and equipment. The personnel required by the joint manning document arrived to augment the joint task force staff by the first week of March. Additional training was vital for the integration of these new personnel in preparation for combat. Using the Combined Air and Missile Defense Exercise Network (CAMDEN) and the Flight Missile Simulator-Digital (FMS-D) simulation systems provided by the Missile Defense Agency, USAREUR Exercise Division and the Warrior Preparation Center were able to model the threat and prepare the shooters and staff of the newly formed joint task force for what lay ahead. Using the Army's Training Model, the joint task force conducted a series of simulation runs to test unit capabilities and evaluate staff reactions to possible situations. The opportunity to rehearse in a simulated environment was a huge benefit to all who participated.

Within 72 hours of receipt of the execution order, U.S. forces under the joint task force occupied battle positions, were integrated into the Israeli defense, and prepared to conduct air and missile defense operations to protect Israel. The joint task force continued training to prepare all personnel



and equipment for combat operations. The Patriot task force was deployed into its battle positions by mid-March, where they augmented the active national defense of Israel.

Previously, when the soldiers of 5-7 ADA (-) had occupied battle positions during the exercise, it had been for less than 24 hours. This time, it would be for much longer. They moved missiles, each weighing approximately two tons, along city streets and across urban terrain to battle positions around central Israel. The city environment presented unforeseen problems rarely encountered by these air defenders who are accustomed to deploying to the forests and fields of Germany and the barren deserts of Southwest Asia.

Amplified fears due to terrorist attacks in the region and the possibility of encountering anti-American war protesters compelled commanders to increase force protection measures as the Patriot batteries convoyed to and from different battle positions. Once in place, security for both personnel and equipment became the number one concern. Other problems still existed. A jagged skyline played a leading antagonist in the setup at most sites. Tall buildings hindered signal transmissions and sacred structures, such as a town mosque, made positioning Patriot equipment a challenge. In addition, strong winds and salt spray from the Mediterranean Sea and sand from the coastline created many maintenance challenges.



*A Patriot missile launcher serves as a backdrop for an Israeli fashion photographer.*

"I am terribly proud of our soldiers and of the systems that they worked so hard to keep operational in defense of the Israeli population and our own maneuver forces in the Gulf," said Green. "Our mission here was to act as a deterrent and that is what we have done. Our presence here allowed [Gen. Tommy Franks, CENTCOM commander] to focus the efforts of the Special Operations forces on Baghdad. The Special Operations forces could focus minimally on the West because we were here."

"If we had not been here, Israel would have been a very lucrative target in the form of uncovered populations," Green. "America's commitment to defend Israel is a sign of our commitment to the region as well as a sign of maintaining a two-tier defense as a requirement for population protection." When the U.S. forces arrived as a joint task force, Green said, "It's one thing to say you are going to support a nation, but it's another to have 'boots on the ground.' We're here with our boots on the ground."

The successful creation of the two-tier system defense, which proved to be a vital deterrence during Operation Iraqi Freedom, has helped redesign theater missile defense and will serve as the groundwork for future multi-tiered ADA weapons systems. No missiles were fired from Iraq toward Israel. The joint task force was a successful deterrent against Iraq. Mission accomplished.

#### **Extended Air Defense Task Force: A Proven Concept**

The Extended Air Defense Task Force (EADTF) is a tri-national organization (U.S., Dutch and German) developed to strengthen common security, enhance air defense operations and promote standardization within the each country's ground-based air defense forces. The EADTF has the on-order mission to assume mission-related air defense command and control functions. Working together in a multinational environment proved timely and relevant to the operations conducted in Turkey.

In a dynamically different area of operations than Israel, Task Force ADA North, consisting of the Extended Air Defense Task Force from Burbach, Germany, Bravo and Delta Battery, 5-7 ADA, from Hanau, GE, and the Royal Netherlands Air Force (RNLAf) with three Patriot batteries, deployed to Turkey in support of the NATO Article IV Operation Display Deterrence. Since 1996, the RNLAf has been conducting Joint Project Optic Windmill (JPOW), an annual joint and combined training event that focuses training on potential future operations in a multi-national theater of operations. As recently as August 2002, many of the same soldiers and airmen who executed the defense of Turkey were actively involved in JPOW. As NATO declared Article IV in the defense of Turkey against Iraqi aggression, the deployment of U.S. and Dutch Patriot batteries provided a timely display of capabilities. The act of deploying forces to Turkey also showed the effectiveness of Patriot in deterring TBM attacks, as Turkish skies remained free from assault by an Iraqi TBM.

For 44 days in Turkey, the United States and the Netherlands combined to create the air defense coverage nec-



*Dutch Patriot missiles are loaded on a ship in Vlissingen Harbor, Netherlands.*

essary to protect the nation from hostile attack by Iraqi missiles. USAREUR's EADTF formed the command and control element of the task force that was under operational control of CENTCOM to provide TBM defense of Incirlik Air Base, Diyarbakir Air Base, and Batman Air Base.

The competing demands of multiple, simultaneous TMD missions required air defense planners, at all levels, to overcome the hurdles of deploying two Patriot batteries without a battalion headquarters. Normally, Patriot batteries operate as part of a Patriot battalion for command and control and logistical support requirements. Patriot batteries do not have the capability to receive a common theater air picture without a battalion Information Coordination Central (ICC). Additionally, batteries require extensive logistical support normally provided by a battalion, such as maintenance and transportation elements, to sustain Patriot operations. The limitations of deploying Patriot batteries autonomously (without a battalion headquarters) forced USAREUR planners to seek unconventional means to ensure they could be supported throughout the conflict and maintain situational awareness.

Although command relationships would change frequently and nations conducted transfer of authority (TOA) of their Patriot units from national control to NATO, the command structure at the operational and tactical levels of command were clear and effective. The NATO Operation Display Deterrence mission is a prime example of a multi-national operation. USAREUR's Extended Air Defense Task Force was selected to provide command and control of all theater missile defense forces operating in Turkey, as well as, serve as the command and control element bridging the gap between NATO and Coalition operations. The EADTF performed a liaison function in the North for the 32nd Army Air and Missile Defense Command (AAMDC) located in Kuwait.

Prior to Operation Display Deterrence, the headquarters EADTF had never deployed in support of a crisis or

conflict situation. The fact that the EADTF found itself in a forward deployed environment showed adaptability of the command and its members. Its function as a command and control element at the tactical, operational and strategic level of a multi-national Patriot Task Force was noteworthy. Positive recognition from NATO validated the USAREUR air defense community's ability to coordinate with all air defense nations within the partnership.

The EADTF, in its role as 32nd AAMDC liaison officers (LNO), provided the interface at the NATO Combined Air Operations Center (CAOC) for all ground-based active defense force operations, and coordinated for ground-based engagement operations. This mission enforced joint doctrine and enhanced the requirement for the Army Air and Missile Defense Command (AAMDC) liaison team.

As part of the coalition, the first planning that EADTF fully participated in was the ADA

Synchronization Conference. This conference was used to write the initial Combined Forces Air Component Commander's (CFACC) Area Air Defense Plan (AADP), which included the initial task organization, with Bravo and Delta 5-7 ADA and the Dutch Patriot units as part of Task Force ADA North, and data link architecture. Even though the Dutch Patriot units had a bi-lateral agreement with Turkey, they planned to synchronize with coalition forces for air and missile defense (AMD). The intent was for the Dutch to be full participants in the coalition data link network to ensure complete AMD for Turkey.

Immediately following the ADA Synchronization Conference, EADTF, dispatched an LNO to Aviano, Italy, to brief the operations officer of 16th Air Force on the plan for AMD in Turkey. The 16th Air Force required direct coordination with EADTF to ensure all facets of AMD were synchronized with operations in the south. The requirement for a supplement to the CENTAF AADP was identified and EADTF spearheaded publication of this document. While EADTF was compiling information for the AADP Supplement, the Dutch decided to TOA their Patriot units to NATO for defense of Turkey. Shortly after the Dutch TOA, the United States followed suit to TOA Bravo and Delta Battery, 5-7 ADA, as well. The switch from planning as part of the coalition to planning for NATO was virtually transparent at the tactical level, since the peacetime mission of EADTF is based on NATO doctrine.

The two biggest challenges that arose as a result of TOA were command and control structure and data link network participation. The initial challenge was the command and control structure and how the EADTF planned on linking both force and engagement operations (FO/EO) between NATO and coalition forces. As a result of TOA, both Dutch and U.S. Patriot units were under tactical control of CAOC 6 through the EADTF. At the same time that EO was performed through NATO, operational control (FO) was still





*A Delta Battery, 5-7 Air Defense Artillery, Patriot missile launcher in position at Incirlik, Airbase, Turkey.*

exercised by 32nd AAMDC through the EADTF. Despite geographical displacement, the EADTF continued to provide situational awareness to NATO and CENTCOM via system status reports and ADA situation reports. The factor that mitigated the command and control challenge the most, was the fact that EADTF had personnel located with the coalition and with NATO. These personnel (both Dutch and American) were not thrown together to create an EADTF specifically for this mission. They work with each other on a daily basis during peacetime operations. The precise coordination that linked NATO and coalition operations for the defense of Turkey could not have been executed this smooth without this multi-national headquarters.

An additional challenge posed to the EADTF was how to ensure seamless AMD within Turkey through the use of the coalition data link network by NATO units. From the start of data link planning at the ADA Synchronization Conference, the Dutch were planned as a participant in the data link architecture. Bravo and Delta Battery, 5-7 ADA, deployed autonomously, were not able to participate in the Link 16 network. Upon TOA to NATO, the bottom-line requirement for the Dutch to receive TBM messages over Link 16 still existed; it was just a matter of how exactly to make this happen between NATO and coalition assets. Just days after the TOA of the Dutch and U.S. Patriot units to NATO, there was a NATO/Coalition data link conference to discuss options on how to reach the common end state of AMD. (After the first ten minutes of the conference it was clear that all participants understood the necessity of the network and a data link network was designed to allow the Dutch Patriot units full access, with no filters, to all coalition TBM data that was provided over Link 16.)

The Netherlands deployed their forces into theater first. Dutch Patriot units began arriving in the Turkish port city of

Iskenderun in late February and were tasked with guarding two air bases. The lead Patriot units were moved to a neighboring Turkish navy support base to begin staging for their two-day trip to the southeastern air base of Diyarbakir, about 143 miles from the Iraqi border). The Scud-busting surface-to-air missile would defend U.S. Air Force elements expected to begin assembling there in the coming days, said Ans Keifeth, a Dutch logistics officer coordinating the Patriot deployment.

USAREUR mobilized and deployed a relevant capability to respond to a call from Turkey for NATO Article IV defense of a NATO country. This call allowed the deployment of U.S. Patriot forces by both air and sea. Knowing that A-Day was about to be ordered, Bravo and Delta Battery, 5-7 ADA, received orders to deploy two minimum engagement packages (MEPs) to Turkey by air. Air assets were allocated, and even though there were changes in types and numbers of aircraft, well-trained unit movement officers were flexible and adapted to the situation. When provided with eight C-5 aircraft for deployment, USAREUR planners at all levels quickly arranged load plans and provided orders for seamless execution. Within four days, equipment flowed into ports and through air bases to their destination. This was an example of exceptional performance in deployment operations by one of the leading tactical units in theater. No less than five previous times in as many years has, this unit had demonstrated its ability to rapidly deploy by air or sea with the only limitation being the transportation medium.

In mid-March, Bravo and Delta Battery, 5-7 ADA, deployed with slices from Headquarters and Headquarters Battery, 5-7 ADA, and the 19th Maintenance Company to provide TBM defense of critical assets in Turkey and to protect NATO and Coalition assets in support of Operation Iraqi Freedom. The task force achieved initial operational capa-

bility quickly after the first three aircraft hit the ground at Incirlik Airbase.

During this conflict, two nations deployed a common system, placed them under the command and control of a U.S. commander and fulfilled the NATO mission. For 44 days, Task Force ADA North assumed the highest readiness state to defeat the threat, maintaining this high state of operational capability to defend critical assets within Turkey. The 607 soldiers and airmen defending Turkey demonstrated resolve, adaptability, and commitment to excellence during this challenging mission.



*Two Joint Task Force Cobra soldiers watch the sun set on the Mediterranean.*

### **Building on Success: Prepared for the Future**

The USAREUR Air Defense Community conducted many historic firsts, deploying to three different nations to provide active defense and a solid deterrence against Iraqi ballistic missiles. The most significant accomplishments included:

- Produced the first two-tier defense design executed to protect a nation from TBM attack.
- Provided the missile defense cornerstone to the NATO Article IV Operation, the first in history, in the defense of Turkey.
- Deployed 69th Brigade Headquarters, two battalion staffs and all 10 USAREUR Patriot batteries to three separate countries by sea and air transport.
- Executed the first deployment of USAREUR's Extended Air Defense Task Force to coordinate the linkage between U.S. Operation Iraqi Freedom and the NATO Operation Display Deterrence.
- Conducting the command and control of a multinational air defense brigade as the Netherlands and the United States joined forces to defend Turkey.
- Planned, coordinated, and executed the integration of a joint/combined and multi-national data link architecture.

USAREUR ADA forces are not sitting on their laurels. With a battalion of forces still forward deployed, and redeployment/recovery operations ongoing in Germany, USAREUR air defense forces are ready to deploy to locations throughout the world. To improve synchronization for Patriot Forces, USAREUR ADA officers participated in the review and revision of the Patriot Forces TSOP. Following Operation Iraqi Freedom, it was realized that there could be improvements to doctrine, tactics, techniques and procedures used by Patriot forces throughout the world in order to en-

hance capabilities based on the achievements accomplished during recent operations. With the upgrades to the Patriot system, enhanced how-to-fight documentation would improve the effectiveness of using this system. Representatives from each of the air defense battalions and brigades, USAREUR's EADTF, the Lower-Tier Project Office, Raytheon and various other air defense units participated in a three week long project to rewrite the previous TSOP and create a document to be used by all Patriot forces no matter where they are stationed. This document does not supersede doctrine as it exists today, it is, rather a supplement to fill in those blanks identified as critical in the execution of combat operations. It is intended for the TSOP to be releasable to all Patriot user nations, culminating in a synchronized Patriot force. This new TSOP is designed to provide a common document that Patriot forces will use to train for any mission regardless of where it may be executed. Thus, ensuring USAREUR Patriot forces are ready and prepared for "ANY MISSION, ANYWHERE!"

The USAREUR ADA community demonstrated a capability to rapidly deploy a relevant force in support of multiple contingency operations across a wide spectrum of joint/combined and multi-national forces. The ability to place a deterrent force on the ground in a short period of time proves the worth of having forward-deployed forces in strategically placed locations to rapidly influence/deter an adversary from committing forces. The effectiveness of USAREUR's expeditionary force was demonstrated as it guarding the skies around the world. USAREUR's Patriot soldiers have again performed in a magnificent manner.

"Hopefully what we've demonstrated to potential enemies is that they're wasting their money on ballistic missiles," Green said.

*Capt. Lisa Bartel, Headquarters, Extended Air Defense Task Force, and Maj. Kyle Kolthoff, Capt Amanda Dodd, and Spc. Kris Steward of the 69th ADA Brigade contributed to this article.*